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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,864	08/31/2001	Kiyoyuki Narimatsu	110520	9510
25944	7590	03/24/2004		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER BOCKELMAN, MARK	
			ART UNIT 3762	PAPER NUMBER 5
DATE MAILED: 03/24/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/942,864

Applicant(s)

NARIMATSU ET AL.

Examiner

Mark W Bockelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2, 4</u> . | 6) <input type="checkbox"/> Other: ____  |

### DETAILED ACTION

The disclosure is objected to because of the following informalities:

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: The superfluous use of commas to join multiple sentence fragments, make the specification and the claims difficult to read. Examples are paragraphs [50] and [51]

Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Applicant's claim 1 refers to a "means for determining-based on the heart sound characteristic information stored in the memory device, the heart sound component contained in the physical signal", which appear to have no corresponding structure in the specification that performs the claimed function. The specification refers to a "first heart sound determining means" and a "second heart sound determining means" which appear to be filters yet do not perform the function of that recited in the claims. It is not understood what structure in the specification is included in the claimed "determining means". The examiner, in accordance with MPEP 2181 , requires applicant to review their specification claims and amend as necessary the language in the claims and specification so the elements being claimed

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unambiguously correspond to elements in the specification. Particularly those elements claimed in a means plus function format.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Since applicant uses means plus function language that is ambiguous in its meaning due to the lack of corresponding structure the claims are ambiguous as to the scope of elements being claimed. Claims 2-6 are narrative in nature and are difficult to determine what structure they include. If applicant intends to include a stored waveform or other representation of an earlier detected signal, its origins offer no patentable distinction since the origins of a signal stored in a device are not apparent. Thus and the additional language directed to its origins merely adds confusion. Applicant merely has a stored signal. On the other hand, if applicant intends to distinguish the claims by reciting the capability to acquire heart sound characteristics determined from earlier sampling of from the chest it is recommended that applicant recite the structure for acquiring such samples and comparing them to later sensed samples.

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***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hellenbrand USPN 3,985,121.

Hellenbrand teaches a device having a sensor for detecting heart sounds that is capable of being worn on other parts of the body than the chest and is therefore “adapted” to do so. A memory device stores previously detected heart sounds. Applicant’s origins of his “previously detected” heart sounds offer no distinction. . The heart sound determining means includes a filter 52 for extracting various frequencies and various time periods (that is each cycle) which thus undergoes frequency time analysis by undergoing correlation with extracted frequencies from the stored device. The first portion of the stored frequency is compared to the second portion of the physical wave, with other portions being filter out before comparison. Each of the microphones can be placed upon the chest. It is noted that applicant’s chest microphone and heart sound sensor could be one in the same as the claims are written, and thus the examiner has applied the Hellenbrand reference in such a fashion.

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Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al 5,025,809. Johnson teaches the the collection and storage of PCG phonocardiograms within a stethoscope that is capable of being worn on portions of the body other than the chest. Column 6 lines 3-19 describe how the digitized new signals are compared analytically with stored signals to find which heart sound components of the stored PGC's match the patient PCG the best.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lester et al USPN 4,129,125 in view of Bennet Jr, et al USPN 5,012,815. Lester et al teaches the use of a wristwatch member for monitoring a patient and teaches that the watch microphones may sense respiratory and heart sounds on a patient (column 6 line19+). While he notes that he wishes to detect heart sounds, he does not discuss comparing the detected sounds to stored sound components. Bennet, Jr et al on the other hand teach the comparison of heart sounds to various acquired Frequency- time spectral PCG's to detect heart abnormalities for automated diagnosis. To have provide

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the Lester device with a spectral analysis program for determining heart problems would have been obvious in view of Bennerr,Jr

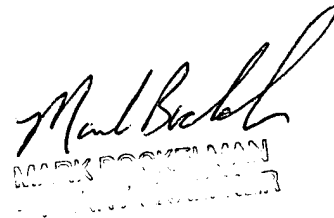
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark W Bockelman whose telephone number is (703)-308-2112. The examiner can normally be reached on Monday - Thursday 10-8:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (703) 308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MWB

March 18, 2004

A handwritten signature in cursive script, appearing to read "Mark Bockelman", is written over a circular official stamp. The stamp contains text that is partially obscured but appears to include "MARK BOCKELMAN" and "PATENT EXAMINER".